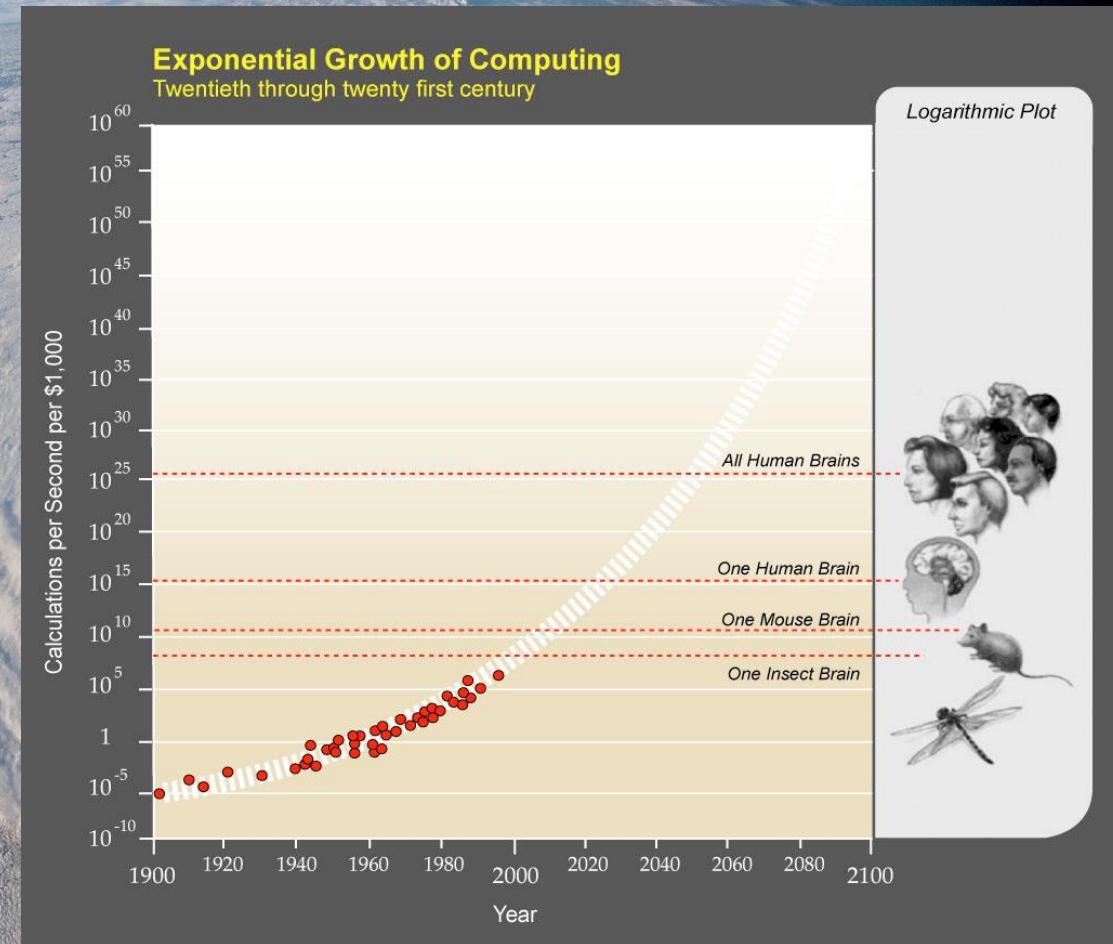




A Future *with* Innovation

Dr. Omar Hatamleh, NASA JSC



Ray Kurzweil

Out of 2,000 distinct types of work activities in 800 occupations

45% of work activities could be AUTOMATED

Authors M Chui, J Manyika, and M Miremadi



Example Of Jobs lost to Future Automation



Cashier

Most factory workers

Accountants

Retail Salesperson

Delivery people

Drivers

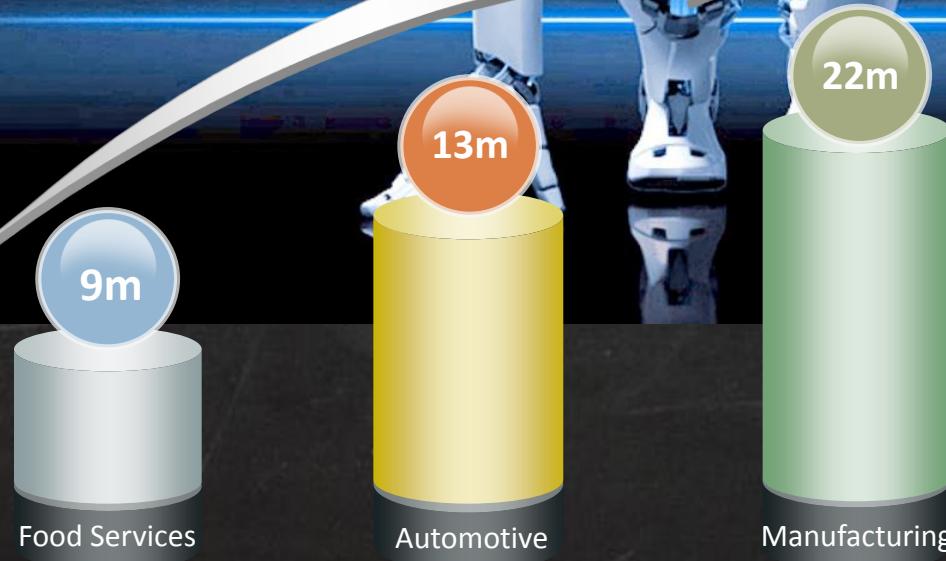
Medical diagnosis

Security Guards

The robotics market is expected to be worth close to \$70B by 2025

Boston Consulting Group

Jobs Lost in USA to Automation by 2025



Source: World Robotics Report. "Robotic Nation" by Marshal Brain IEEE Spectrum

“The top 10 in-demand jobs in the future don’t exist today. We are currently preparing students for jobs that don’t yet exist, using technologies that haven’t been invented, in order to solve problems we don’t even know are problems yet.”

Changing How America Works, former U.S. Secretary of Education Richard Riley



Roughly 15 years ago many of todays most demanded jobs like IOS & Android developer, Social Media related jobs, big data scientist,... did not exist!

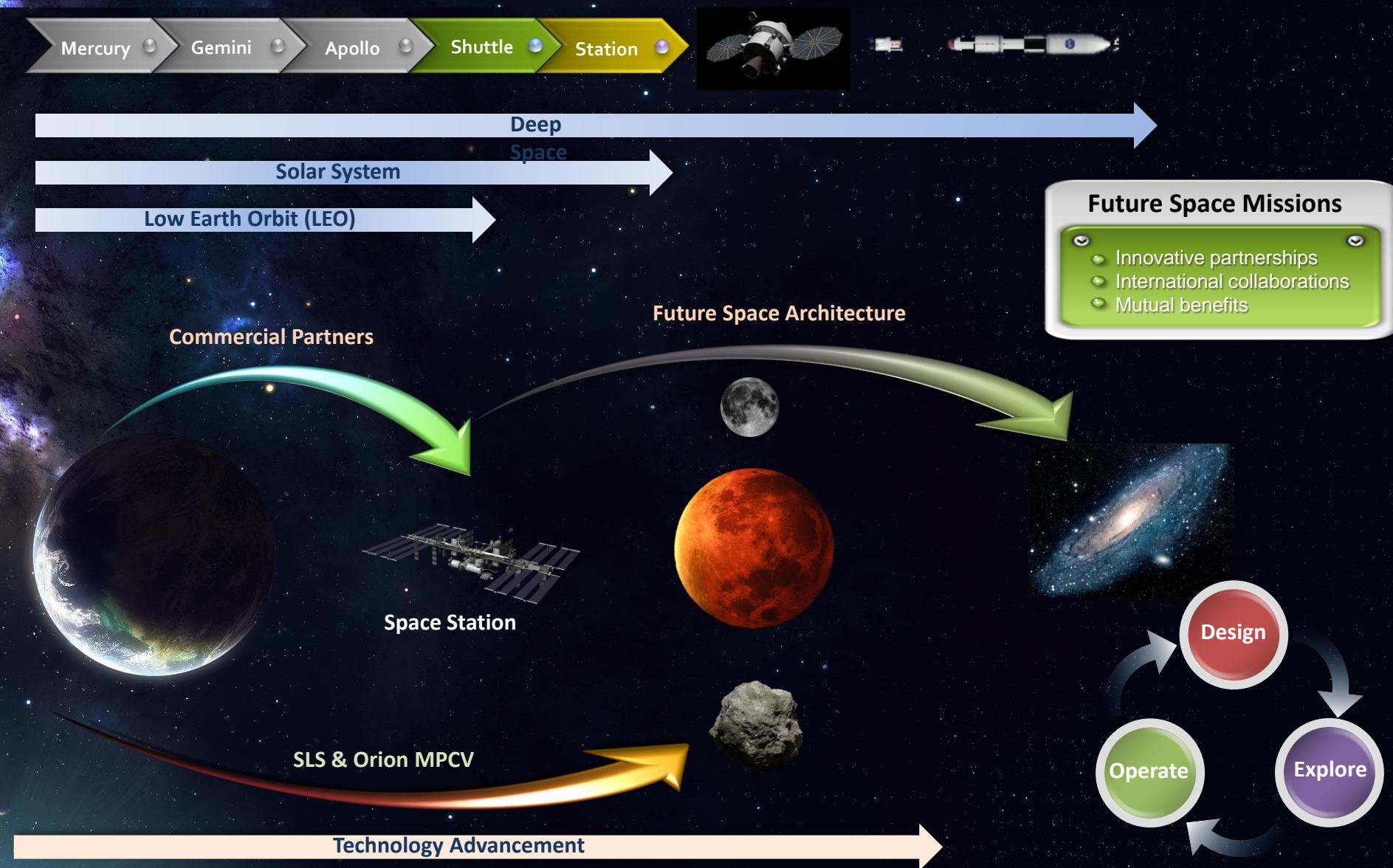




Bridge the gap between academic institutions and industry in terms of education needed to fill the future jobs, and technology produced is aligned with industry needs

Strategize about what is going to be main stream in the next 10-15 years and start investing today

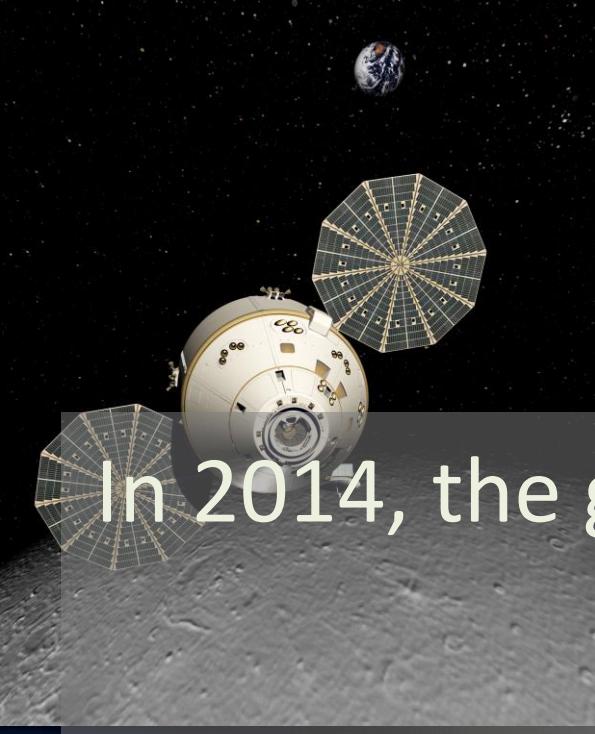
Human Spaceflight Missions



Supporting nearly **63 million** jobs and **\$2.7 trillion** in global GDP, the air transport industry is a **driver** of the global economy

<http://aviationbenefits.org/economic-growth>





In 2014, the global space economy grew to
\$330 Billions

The Space Report 2015: The Authoritative Guide to Global Space Activity



What will be the next Game changing Technology?



Future mainstream Technologies

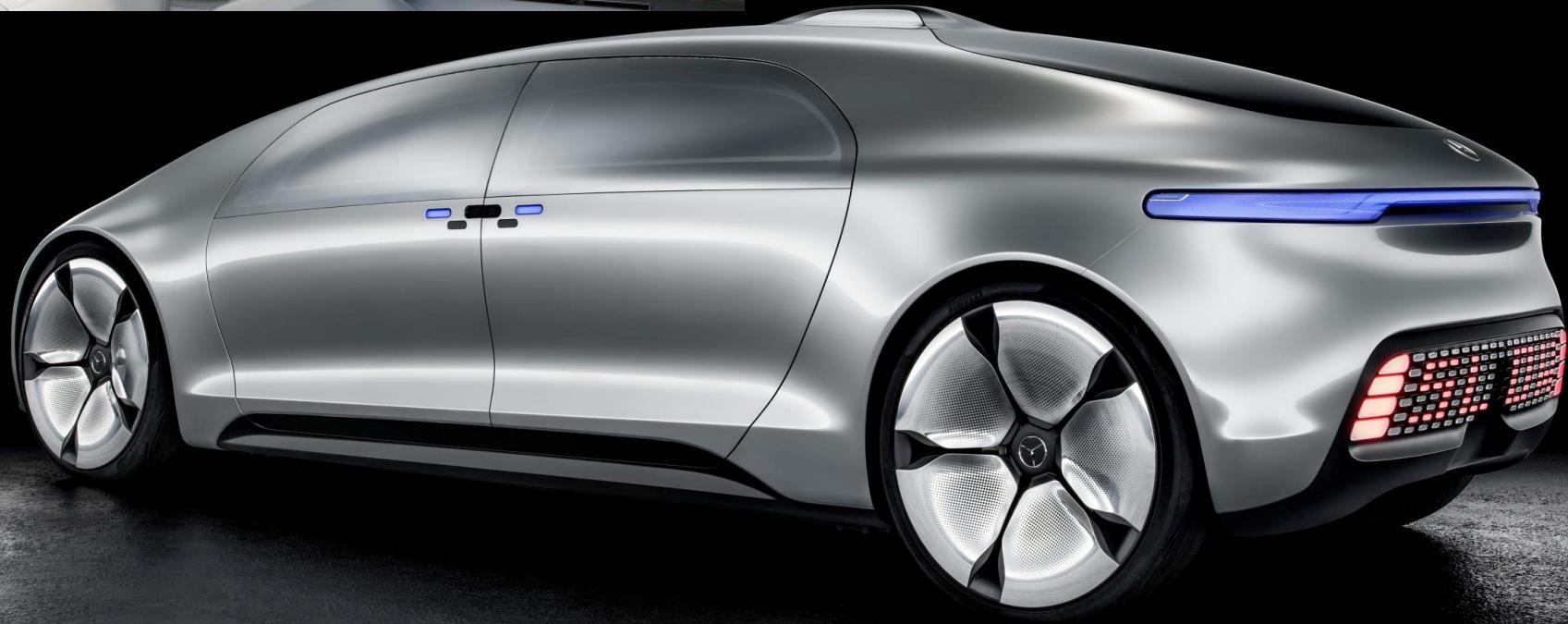


Advanced Autonomous Systems, AI & Robots



Big Data, & IoT





Driverless Cars

5MB Hard Drive 1956



512 GB Drive 2014

Miniaturization





Augmented Reality



Autonomous Flying Vehicles



3D Manufacturing



Synthetic Biology

Plus Many More...



Technologies that may also impact
various industry